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## (54) CIGARETTE-LIKE SMELLING UTENSIL AND MANUFACTURE OF THE SAME

### (57)Abstract:

PURPOSE: To provide a smelling utensil approximating (extremely) to a cigarette in the shape, tactile sensation and taste with excellent smell holding property and actual feeling of refreshment by winding a paper material having a specified gas permeability around a fiber bundle core body including a refrigerant and by properly adding a mouth applying paper.



CONSTITUTION: A smelling utensil usable for quitting no smoking or a substitute for moderate smoking has a paper material (r) of 1,000-10,000 seconds of gas permeability wound around a fiber bundle core body (t) containing a refrigerant, while being properly provided with a mouth applying paper (m). This smelling utensil is manufactured by the use of a machine for taking up a filter plug for tobacco, and for the rolled paper material is used working raw paper treated with origomer of polymer emulsion, dispersion or solution (resin working agent). For the refrigerant are used various perfumes, for example, a mint perfume like L-menthol and mint oil, citrus perfume like orange, lemon and lime, soft fruit perfume like apple, banana and grape, vanilla perfume like vanilla, or the like.

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### LEGAL STATUS

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**DETAILED DESCRIPTION**

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the \*\*\*\* implement which obtains coolness by inhalation, and relates to the paper volume tobacco-like \*\*\*\* implement containing a refrigerant in detail.

[0002]

[Description of the Prior Art] the purpose which eliminates OK and ozostomia for coolness by inhaling aroma (it being hereafter named a refrigerant or perfume generically), such as peppermint and menthol, -- it is -- or various kinds of \*\*\*\* implements as the object for taste, or prohibition of smoking or temperance-in-smoking tools -- an indication -- or Kamiichi has been carried out

[0003] As goods, on [ of storage ] required, this kind of \*\*\*\* implements are important needs, and the aroma maintenance nature (it is hereafter written as a smell retaining property) of the refrigerant which is easy to vaporize can divide them roughly as technical thought for the conventional smell retaining property improvement, and can raise them two. It is the means (an example, JP,1-3308,Y) which one uses a specific compound together to perfume, it is a means (an example, JP,43-28077,B) to suppress the vaporization nature of perfume, and other one attaches a refrigerant sinking-in fiber material into the product made of synthetic resin, or the barrel made from resin film lamination paper material, and carries out the seal of the great portion of opening of barrel ends.

[0004]

[Problem(s) to be Solved by the Invention] However, since it was the thing of the purpose which was indicated by the former and which solves, removes composition at the time of smoking, and \*\*\*\* by the force and the perfume content portion was only a filter portion, although the aroma fly off area to content partial capacity was large and there was improvement of perfume preparation liquid, the smell retaining property was limited considerably.

[0005] Moreover, the barrel of the latter composition is non-permeability, and welding, since the seal is carried out, although most of the both ends can suppress the fly off of aroma considerably, it becomes difficult for the ventilation resistance at the time of inhalation to tend to become excessive, and to obtain the realizable amount of aroma. Moreover, the sense of incongruity of a different thing is large, for example, when it is going to use it as a substitute for prohibition of smoking or temperance in smoking, it is very hard to get [ taste / tactile feeling and ] used with paper volume tobacco. Furthermore, in the thing of such composition, since it cannot manufacture using the usual filter plug loop wheel machine for tobacco, it is difficult to apply the process of high productivity.

[0006] The purpose of this invention is extremely approximated to the configuration of paper tobacco, tactile feeling, and taste, and it excels in the balance of the cool feelings at the time of a smell retaining property and suction, and is in showing the composition of the \*\*\*\* implement which can moreover be manufactured using the usual filter plug loop wheel machine for tobacco.

[0007] As a result of this invention person's investigating this target and repeating research wholeheartedly, the air permeability of the paper material which rolls the fiber-bundle axis containing a refrigerant has big influence on the performance of a \*\*\*\* implement. Furthermore, it came to complete this invention which finds out being obtained and describes it minutely below on the basis of this result by using the paper material in which the suitable balance of a smell retaining property and the effective coolness at the time of suction has the air permeability of the specific range.

[0008]

[Means for Solving the Problem] The air permeability by which this invention was measured by the method of

JISP8117 as the first invention is the chartas for 1,000 - 10,000 seconds. Further that this paper material is resin treatment paper considering the paper volume tobacco-like \*\*\*\* implement around which the fiber-bundle axis containing a refrigerant was wound and with which it comes to attach mouth rolled letter paper suitably as the second invention the third invention As the manufacture method of the \*\*\*\* implement of this invention, it is shown that the filter plug loop wheel machine for tobacco is used. The fourth invention is rolled letter paper for paper volume tobacco-like \*\*\*\* implements characterized by the air permeability measured by the method of JISP8117 using the paper material for 1,000 - 10,000 seconds.

[0009] The \*\*\*\* implement of this invention is the rolled letter paper made from paper material of this invention (r), a refrigerant sinking-in fiber bundle (t), and \*\*\*\*, as illustrated to drawing 1. It is the thing of the shape of paper volume tobacco which consisted of attached mouth rolled letter paper (m).

[0010] The rolled-letter-paper form material used for the \*\*\*\* implement of this invention processes a converting paper with oligomer or a polymer system emulsion, a dispersion, or a solution (it is named a resin treatment agent generically below), and adjusts air permeability to the predetermined range.

[0011] As a resin treatment agent, for reasons of sanitation [ safe ], although a viscose is suitable, it is harmless to the others object, and if it can be used for paper material or fiber, either natural material semisynthesis material or a synthetic material is usable. If the thing used as the main material is illustrated as a resin treatment agent of inside [ this ] synthetic-resin Lord material, the single from ethylene, vinyl acetate, an acrylic acid, an acrylic ester, a vinyl chloride, a vinylidene chloride, styrene, a methacrylic acid, methacrylic-acid ester, and various kinds of other monomers or a copolymerization object, polyurethane, a polyurea, a polyamide, various kinds of heat cross-linking polymerization objects or oligomer, and also such mixture can be raised.

[0012] After processing processing of the converting paper by the viscose infiltrates a viscose into stencil paper, it can be immersed during an acid bath and can be performed by the method of reproducing a viscose as a cellulose coat on stencil paper fiber.

[0013] Moreover, as a processing processing method by the resin treatment agent of synthetic-resin Lord material, sinking in, a spray, coating, etc. can apply the method of common use.

[0014] In order to adjust the air permeability of the rolled-letter-paper form material used for this invention to the predetermined range, the line speed of processing processing can be adjusted or it can carry out by changing the solid-content concentration of a resin treatment agent etc. The air permeability of the resin treatment paper (namely, rolled-letter-paper form material) used for this invention is 1,000 - 10,000 seconds preferably for 1,000 seconds to 50,000 seconds. In 1,000 or less seconds, there are few smell retaining property effects of smoking requisites, in 50,000 seconds or more, the inhalation-of-air resistance at the time of inhalation becomes large, and effective coolness becomes is hard to be obtained. Moreover, the air permeability value of a bird clapper is because \*\*\*\*\* of a pitch became excessive excessively at the time of resin treatment, and if it means that the opening of a converting paper had carried out loading more than required and it uses the paper material of this state as rolled letter paper, since room for a line paste to sink into \*\*\*\*\* will decrease, the adhesive property of rolled letter paper is spoiled inevitably. In addition, adhesion of the excessive amount of resins increases the sense of incongruity which hardens [ taste / the feel of a \*\*\*\* implement, and ] and is contrasted with a cigarette.

[0015] Next, as a refrigerant used for this invention, various kinds of perfume is applicable. as instantiation, SHITORASU system perfume; apples, such as mint system perfume; oranges, such as an L-menthol; peppermint-oil; spearmint and peppermint, lemon, and a lime, a banana, a grape, etc. are soft -- vanilla system perfume, such as fruits system perfume; vanilla, etc. is mentioned independent in these perfume -- or it compounds, and it can be used, preparing with a plasticizer, a solvent, a dilution agent, a stabilizer, a \*\*\*\* inhibitor, a vaporization assistant, etc. suitably

[0016] Next, as main material for fiber-bundle axes used for this invention, slivers, such as synthetic fibers, such as chemical fibers, such as natural fibers, such as cotton, hemp, wool, and silk, a reproduction cellulose, and cellulose acetate, a polyamide, polyester, and an acrylic, and also polypropylene, and polyester, are applicable. Among these, in order to acquire the feel and taste which can use the manufacturing process of paper tobacco as much as possible, and are approximated to paper tobacco as much as possible, a cellulose acetate tow is suitable.

[0017] Manufacture of the \*\*\*\* implement of this invention can use the loop wheel machine of the filter plug for paper volume tobacco etc., and can be carried out suitably. Hereafter, a drawing explains the mode.

[0018] (b) In the rolled-letter-paper process drawing 2, pull out from the fiber bundle B which collected 1,000-10,000

2-8-denier fiber, for example, the bail which hardened the cellulose acetate tow (T) in the shape of a block, and unfold a debt of the fiber in a tow with Banting Jet (1) of a loop wheel machine, and a \*\*\*\* roll (3) (it \*\*\*\*). In addition, (2) is a tension roll. Next, a refrigerant preparation triacetin is made to adhere with a plasticizer roll (4) and a plasticizer feeder (5), and a tow is sent into the ton good section (7) with tow transport jet (6).

[0019] The rail paste of the vinyl acetate system for on the other hand pasting up a tow and rolled letter paper on a width of 24-28mm and the weighing capacity about 20 to 30 g/m<sup>2</sup> paper material (R) which were adjusted to predetermined air permeability by resin treatment from another line with rail temporizing cloth equipment (G) After winding a tow around the edge of rolled letter paper with rolled letter paper furthermore, the line paste (hot melt adhesive of an ethylene-vinyl acetate system) for pasting up rolled letter paper is applied according to the hot-melt gun 10, and it is sent to the ton good section.

[0020] It becomes the form of the ton good section where a tow (T) and paper material (R) lapped by the way, and the tow was rolled, and is sent to an iron (8), and the ends of rolled letter paper paste up by the hot melt with the heat of an iron.

[0021] Thus, the paper volume tobacco-like barrel which rolled the fiber-bundle axis containing a refrigerant by the \*\*\*\* form material of this invention is made, it is sent to a decision process, and is judged by predetermined length (70-120mm), and a filter plug is made. Line speed of the rolled-letter-paper process by the loop wheel machine can be performed the speed for 50-600m/(a part for 500-7,000%).

[0022] (b) If it adds to a mouth, rolled letter paper becomes wet with saliva, a chipping process, thus the made \*\*\*\* implement become soft, and a configuration may be spoiled. In order to prevent this, with the paste of a vinyl acetate system, it \*\*\*\*\* and the water-repellent mouth rolled letter paper which applied the wax to the front face of the mouthpiece section may be stuck on the inside (chipping).

[0023] Although only one side is the paper which applied the wax and, as for this mouth rolled letter paper, may use what paper, one side is usually printed and the pulp paper of the basis weight 30 which applied the wax on it - 40 g/m<sup>2</sup> is used. Pasting of the mouth rolled letter paper in a chipping machine can usually be carried out the speed for 1,000-4,000%. Thus, since the \*\*\*\* implement of this invention can be \*\*(ed) if it is manufactured using a high-speed loop wheel machine and a chipping machine, it has the merit which can be manufactured and offered cheaply.

[0024]

[Example] Next, an example explains the technical thought of this invention still more concretely.

[0025] The filter plug loop wheel machine for example 1 paper volume tobacco was used, the rolled letter paper of the cellulose acetate tow (5Y-35000) into which 29mg per plug 70mm of L-menthol was infiltrated was carried out in the resin treatment paper for air permeability 40,000 seconds, and the paper volume tobacco-like \*\*\*\* implement of 70mmLx26mmC was manufactured. In addition, resin treatment paper was produced as follows.

[0026] After having infiltrated [ be / under / tub / of a viscose ] letting it pass / it ] the converting paper (pulp paper) of 30mg of basis weights, having extracted the excessive viscose with 2 rolls, being immersed in the acid bath after that and stiffening a cellulose as a film, it dried through the dryer and rolled round on the roll. The slit of this paper was carried out to 27mm width, and the rolled letter paper for plugs was produced.

[0027] The resin treatment paper of example of comparison 1 example 1 was substituted, the converting paper was used, and the paper volume tobacco-like \*\*\*\* implement was manufactured like the example 1. The smell retaining property sample of an evaluation examination item and a measuring method \*\* \*\*\*\* implement was left in the air conditioned room of RH 21 degree-Cx65%, and the amount of residual L-menthol in a sample was analyzed by the gas chromatograph with time.

\*\* Air permeability JIS of sample offering rolled-letter-paper form material It was based on P-8117, or applied correspondingly and measured. The test result was put up for Table 1.

[0028]

[Table 1] The amount of L-menthol survival of the air permeability of rolled-letter-paper form material, and a sample

項目	比較例1	実施例1
巻紙用紙材の透気度	20秒／100ml エアー	40,000秒／100ml エアー
メントール残存量	放置前	29.0ml
	1日放置	17.0mg
	3日放置	3.5mg
	6日放置	0.4mg
	8日放置	0.2mg
		10.8mg

offering \*\*\*\* implement

The vaporization nature of L-menthol differed greatly, the \*\*\*\* implement of this invention showed aroma-retention maintenance nature markedly also in the service test compared with the thing of the example of comparison, and effective \*\*\* coolness was obtained by the air permeability of rolled-letter-paper form material over the long period of time so that clearly from Table 1.

[0029] By [ which are depended on example 2 2 roll ] extracting and adjusting \*\*, except having changed the amount of viscose sinking in, processing processing was performed like the example 1 and the rolled-letter-paper form material for air permeability 3,500 seconds (R1) was manufactured.

[0030] The amount of viscose sinking in was changed like example 3 example 2, and the rolled-letter-paper form material for air permeability 40,000 seconds (R2) was produced.

[0031] The converting paper (R0) of use was prepared for examples 2 and 3 as a contrast sample for example of comparison 2 comparison.

[0032] The envelope of 25mm angle was made from the sample offering rolled-letter-paper form material of the evaluation test-method example 2.3 and the example 2 of comparison, respectively, and to these, 100-140mg of L-menthol was put in, it was sealed, it was left in the room temperature (25-30 degrees C), and the amount of residual L-menthol in a sample was measured with time. The measuring method of the air permeability of paper material and the amount of survival of L-menthol is as aforementioned. The test result was put up for Table 2.

[0033]

[Table 2] The amount of survival of L-menthol in the air permeability of sample offering rolled-letter-paper form

項目	サンプル	比較例2	実施例2	実施例3
	R0	R1	R2	
巻紙の透気度	20秒／100ml エアー	3,500秒／100ml エアー	40,000秒／100ml エアー	
L-メントールの残存量	放置前	120mg	136mg	100mg
	6日放置	60mg	126mg	100mg
	10日放置	20mg	116mg	92mg
	44日放置	0mg	56mg	70mg

material, and an envelope

The small (it is easy to penetrate air) rolled-letter-paper form material R0 of air permeability also tends to penetrate L-menthol, and it turns out that the large (it is hard to penetrate air) rolled-letter-paper form material R1 and R2 of air permeability cannot penetrate L-menthol easily, either so that clearly from Table 2.

[0034]

[Effect of the Invention]

1. Since it is the composition of paper volume tobacco, the composition made to approximate to a process as much as possible, and a process, the \*\*\* implement of this invention has the almost same configuration as paper volume tobacco, size, tactile feeling, and taste, and even if it uses it for prohibition of smoking or temperance in smoking, it

does not produce \*\*\*\*\* sense of incongruity.

2. The \*\*\*\* implement of this invention was able to balance the cool feelings at the time of inhalation of air for the smell retaining property by adjusting the air permeability of rolled-letter-paper form material to the specific range.
3. As a means to adjust the air permeability of rolled-letter-paper form material, resin treatment of the converting paper by polymer or the emulsion of an oligomer system, the dispersion, or the solution can apply suitably.
4. By substituting the rolled-letter-paper form material of common use, and using the rolled-letter-paper form material of this invention, according to a process, it can have others in the usual filter plug manufacturing installation row for paper volume tobacco for the same high productivity altogether, and they can manufacture the \*\*\*\* implement of this invention.

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**CLAIMS**

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[Claim(s)]

[Claim 1] The paper volume tobacco-like \*\*\*\* implement around which the fiber-bundle axis containing a refrigerant was wound for the air permeability measured by the method of JISP8117 by the paper material for 1,000 - 10,000 seconds and with which it comes to attach mouth rolled letter paper suitably.

[Claim 2] The paper volume tobacco-like \*\*\*\* implement according to claim 1 characterized by paper material being resin treatment paper.

[Claim 3] The manufacture method of a paper volume tobacco-like \*\*\*\* implement given in the claims 1 and 2 characterized by to cut to rolled letter paper with the filter plug loop wheel machine for paper volume tobacco at predetermined length, or attaching mouth rolled letter paper by the chipping machine further if it requires.

[Claim 4] Rolled letter paper for paper volume tobacco-like \*\*\*\* implements characterized by the air permeability measured by the method of JISP8117 using the paper material for 1,000 - 10,000 seconds.

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